

STEAM, CYLINDERS, AND VALVE GEARS

(PART I)

EXAMINATION QUESTIONS

(1) How many degrees are there between the freezing and boiling points on a Fahrenheit thermometer? ART. 23.

(2) When is steam considered wet, and when dry? ART. 43.

(3) Explain, briefly, the diagrams in Fig. 6. ART. 58.

(4) Why are pedestals provided with wedges and shoes? ART. 65.

(5) What is force? ART. 2.

(6) What is absolute temperature? ART. 26.

(7) Explain the difference, in appearance, of wet, dry, and superheated steam. ART. 44.

(8) When is an engine on the dead center? ART. 59.

(9) Explain the duty of the equalizer R, Fig. 21. ART. 70.

(10) What is work? ART. 3.

(11) Can the quantity of heat a body contains be determined from its temperature? Explain. ART. 18.


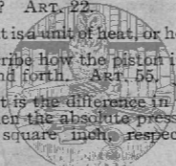
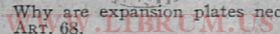
(12) If an engine brake is kept set while the engine descends a very long down grade, what will be the result? Explain. ART. 36.

(13) What is wiredrawn steam? ART. 45.

(14) State the main distinguishing features of the following types of locomotives: Eight-wheeled; mogul; ten-wheeled; consolidation; twelve-wheeled; decapod; Columbia; and Atlantic. ART. 60.

(15) How do the equalizing levers maintain the load on the drivers equal? ARTS. 69 to 71.

(16) What is the unit of work called, and how much work does it represent? ARTS. 5 and 6.

- (17) How is temperature measured? ART. 19.
- (18) What is: (a) sensible heat, and (b) latent heat? (a) and (b) ART. 34.
- (19) Referring to Fig. 3, what must be done to make the piston move back and forth in the cylinder? ART. 52. 
- (20) Explain the difference between the rigid and the total wheel base of a locomotive. ART. 62.
- (21) How is a locomotive boiler attached to the frames? ART. 68.
- (22) How can the rate at which work is done be determined? ART. 9.
- (23) What is meant by the boiling point on a thermometer? ART. 22.
- (24) What is a unit of heat, or heat unit? ART. 35.
- (25) Describe how the piston in Fig. 4 is made to move back and forth. ART. 55. 
- (26) What is the difference in the temperature of the steam when the absolute pressure is 140 and 200 pounds per square inch, respectively? ART. 48 Page 23.
- (27) Why are expansion plates necessary on a boiler? ART. 68. 
- (28) What is the unit of power? Explain fully. ART. 10.
- (29) What is meant by the freezing point on a thermometer? ART. 22.
- (30) What is steam? ART. 37.
- (31) Explain how the engine shown in Fig. 5 works. ART. 57.
- (32) What are the pedestals of a locomotive? ART. 64.
- (33) How would you proceed to set up the wedges? ART. 76.
- (34) What is a wide-firebox engine? ART. 60, 9.
- (35) What is the duty of the oil cellar in a driving box? ART. 75.